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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,093	02/01/2002	Georg Steinbichler	H55-054 US	7526
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NOTARO AND MICHALOS				
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SUITE 110				
ORANGEBURG, NY 10962-2100				
EXAMINER				
HEITBRINK, JILL LYNNE				
ART UNIT				
PAPER NUMBER				
1732				

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/069,093		STEINBICHLER ET AL.	
	Examiner		Art Unit	
	Jill L. Heitbrink		1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 27, 2004 has been entered.

2.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 7-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6,680,012. Although the conflicting claims are not identical, they are not patentably distinct from each other because the pressure in the antechamber is used to fill the

mold cavity upon opening of the exit closure means. This opening of the exit closure means would inherently directly modify the pressure pattern in the mold cavity since the "opening of the closure means 2 can be effected in a controlled manner in order to modify the pressure in the mold cavity 3" (col. 2, lines 60-62 of Pat. No. 6,680,012).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 7-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amendment to claim 7 as to the shut-off means being "opened and closed by a control means for directly modifying a pressure pattern in the mold cavity" does not have support in the original disclosure. The examiner notes that the specific amendment does not clearly state subsequent opening and closing, however, applicant's arguments are directed to this amendment modifying a pressure pattern in the mold cavity by opening and closing of the shut-off means subsequent in time to the initial release of the plastic material under pressure. The specification, page 2, line 30- page 3, line2, defines "a controllable hydraulic unit 12"

(which would relate to the claimed "control means") which via the lever 11 moves the closure needle 9 and shut-off means. Additionally, the specification at page 3, lines 9-12 states "Opening of the shut-off means 2 can also be effected in a controlled manner in order to modify the pressure pattern in the mold cavity 3 which is determined primarily by the adiabatic relief of pressure of the plastic material in the antechamber 1". The specification does not have support for reopening the shut-off means again after the injection by the adiabatic relief of pressure. The modification of the pressure pattern does not suggest to a person of ordinary skill in the art that the shut-off means is reopened. The specification, page 4, lines 12-15, state that a more uniform product would be obtained by delay of the opening of the shut-off means 2. A person of ordinary skill in the art could interpret this more uniform product as having a more uniform pressure pattern when formed in the cavity.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bronnenkant et al. Pat. No. 3,052,925.

9. See col. 1, lines 10-24 and col. 4, lines 18-45. The shut-off means (nozzle valve 63) being opened by a control means for directly modifying a pressure pattern in the

mold cavity would have been obvious in Bronnenkant since the opening of the valve to allow the plastic material to "explode" into the mold cavity (col. 4, lines 62-68) wherein the explosion of the plastic material into the cavity changes the pressure in the cavity to modify a pressure pattern in the mold cavity. Clearly the opening of the valve would be controlled to occur after the building of pressure in the accumulator. The filling of the mold cavity causes the pressure to change in the cavity and thus "modify a pressure pattern in the mold cavity".

10. It is unclear in the specification and claims as to what type of modification in the pressure pattern is occurring from the controlled manner of opening the valve.

Additionally, it is unclear as to what manner the control is and how the opening of the shut-off means effects the pressure pattern in the mold cavity. The following is a different interpretation of these terms which are obviously met by Bronnenkant et al.

11. The pressure in the antechamber is controlled to "a predetermined pressure" in Bronnenkant (col. 4, lines 26-36). The shut-off means being opened in a controlled manner in order to modify a pressure pattern in the mold cavity would have been obvious in Bronnenkant since a change in the predetermined pressure in the chamber will inherently change the pressure pattern in the mold cavity and the nozzle valve will be opened in a controlled manner after the predetermined pressure has been reached in the chamber.

12. Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bronnenkant et al. Pat. No. 3,052,925 taken together with Xu Pat. No. 6,322,347.

13. Xu teaches a process of injection molding foam material wherein the material accumulates in the space 81 closed by valve 64 with a pressure of over 1000 bars (col. 11, lines 58-65 pressure of about 1500 to about 30,000 psi). The pressure produced in Bronnenkant for the expansive pressure to fill the mold being over 1000 bars would have been obvious to a person of ordinary skill in the art since these high pressure are known in the art of injection molding so as to maintain a single phase material prior to exploding into the mold cavity.

14. Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xu Pat. No. 6,322,347 taken together with Weidner et al. Pat. No. 4,266,928.

15. Xu discloses a process of injection molding foam material wherein the material accumulates in the space 81 closed by valve 64 with a pressure of over 1000 bars (col. 11, lines 58-65 pressure of about 1500 to about 30,000 psi). Weidner et al. teaches that the pressure difference between the accumulator and the mold causes the foam to be sucked in the mold. It would have been obvious to a person of ordinary skill in the art that the high pressure within the space 81 will cause, upon opening of the valve 64, the existence of at least half of the pressure achieved in the cavity in the method occurring even if the volume of the antechamber is kept constant during the injection operation. Clearly, even if the volume of the antechamber is kept constant material will flow and foam into the cavity of Xu to a significant amount caused by the high pressure in the space 81. "At least half of the pressure achieved in the mould cavity" is dependent on the pressure achieved in the mold cavity and thus is variable. The pressure achieved in the mold cavity of Xu is taught to be low so as to provide the desired nucleation density.

Response to Arguments

16. Applicant's arguments filed Aug. 27, 2004 have been fully considered but they are not persuasive.


17. Applicant argues that the modifying of the pressure pattern on page 3, line 10 of the specification would inherently require reopening of the shut-off means. However, the specification has no support for reopening of the shut-off means. A pressure pattern within the cavity can be modified by the opening of the shut-off means at different pressure within the antechamber. Each different combination of pressure and volume (also, temperature) in the antechamber will produce a different pressure pattern in the mold cavity.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill L. Heitbrink whose telephone number is (571) 272-1199. The examiner can normally be reached on Monday-Friday 9 am -2 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jill L. Heitbrink
Primary Examiner
Art Unit 1732

jlh